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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,202	04/18/2001	Yoshinori Kanesaka	109304	6501

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EXAMINER	
AGGARWAL, YOGESH K	
ART UNIT	**PAPER NUMBER**
2615	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/836,202	KANESAKA, YOSHINORI	
	Examiner	Art Unit	
	Yogesh K. Aggarwal	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 3-6 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 3-6 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/16/2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 3-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto (US Patent # 5,428,463) in view of Hasegawa et al. (US Patent # 5,917,620).

[Claim 3]

Goto teaches an image pickup element comprising groups of image pickup elements (figure 3, solid-state imaging device 2_i (i=1-4)) each image pickup element group including a plurality of image pickup elements (figure 3, line sensors 3_i (i=1-4)) linearly arranged in rows on a substrate (figure 4 shows a plurality of solid state devices arranged on a substrate 10), wherein a row of image pickup elements in the image pickup element group and another row of image pickup

elements in the same image pickup element group are arranged such that respective image pickup elements match in position in a direction in which the image pickup elements are arranged (See figures 3 and 4, col. 3 lines 20-40, col. 3 line 60-col. 4 line 4) comprising

a light source illuminating an original (It would be inherent to have a light source illuminating an original 10 in order for reflected light to be collected and converted by the solid state imaging device),

a light-gathering lens (figure 3, lens 4) gathering the light reflected onto the image pickup element (col. 3 lines 20-26) and

an averaging device (figure 3, signal processing section 8) subjecting to averaging operation a plurality of pixel data sets, have been read at different times from the same position with reference to a direction in which image pickup elements of the respective image pickup element rows are arranged, and outputs a result of averaging operation as one set of pixel data (col. 3 lines 29-52, Also see col. 2 lines 16-27).

Goto fails to teach a color image pickup element including groups of image pickup elements provided for a plurality of colors, a plurality of mirrors reflecting light which has originated from the light source and has been reflected from or passed through the surface of the original, an analog-to-digital conversion section subjecting to analog-to-digital conversion pixel data output from the color image pickup element, a pixel data storage device storing pixel data which have been subjected to analog-to-digital conversion by the analog-to-digital conversion section and after storing the data has been subjected to image processing.

However Hasegawa teaches a color image pickup element (figure 6), comprising groups of image pickup elements (figure6, elements1704a-c, 1706a-c, 1708a-c) provided for a plurality

of colors (Red, green and blue), a plurality of mirrors (figure 7, mirrors 1802-1804) reflecting light which has originated from the light source (1805) and has been reflected from or passed through the surface of the original (original placed on glass platen 1810), an analog-to-digital conversion section (figure 10a showing analog signal processing unit 101 having A/D unit 101e) subjecting to analog-to-digital conversion pixel data output from the color image pickup element (See figure 10a), a pixel data storage device storing pixel data which have been subjected to analog-to-digital conversion by the analog-to-digital conversion section and after storing the data has been subjected to image processing (figure 18, RAM 1801 showing pixels that have been stored for white level correction in the unit 104 after being processed by the A/D conversion unit 101e).

Therefore taking the combined teachings of Goto and Hasegawa, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have color image pickup element including groups of image pickup elements provided for a plurality of colors, a plurality of mirrors reflecting light which has originated from the light source and has been reflected from or passed through the surface of the original, an analog-to-digital conversion section subjecting to analog-to-digital conversion pixel data output from the color image pickup element, a pixel data storage device storing pixel data which have been subjected to analog-to-digital conversion by the analog-to-digital conversion section and after storing the data has been subjected to image processing in order to provide stable image signals at high speed by having appropriate signal level correction according to the direction of transfer of image signals as taught in Hasegawa (col. 7 lines 10-14).

[Claim 5]

This is a method claim corresponding to apparatus claim 3. Therefore it has been analyzed and rejected based upon apparatus claim 3.

5. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto (US Patent # 5,428,463), Hasegawa et al. (US Patent # 5,917,620) and in further view of Azima et al. (US Patent # 6,252,676).

[Claim 4]

Claim 4 is similar to claim 3 except an addition device subjecting to **adding operation** a plurality of pixel data sets, have been read at different times from the same position with reference to a direction in which image pickup elements of the respective image pickup element rows are arranged, and outputs a result of **adding operation** as one set of pixel data.

However Azima et al. teaches that an averaging is performed by adding the values of the pixels and dividing by the number of pixels. For example, if there are 16 pixels being averaged, and 13 are 1's, then the result of the average is the fraction 13/16 and in another embodiment, the averaging is accomplished by summing the pixels together but not dividing (col. 10 lines 37-45) in order to reduce the time and hardware required to perform image processing.

Therefore taking the combined teachings of Goto, Hasegawa and Azima, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have an adding operation being performed on a plurality of pixel sets by just adding the pixels and not dividing the pixels in order to reduce the time and hardware required to perform image processing.

[Claim 6]

This is a method claim corresponding to apparatus claim 4. Therefore it has been analyzed and rejected based upon apparatus claim 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K. Aggarwal whose telephone number is (571) 272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA
November 27, 2005

DAVID OMETZ
SUPERVISORY PATENT EXAMINER